IVX® X-Class

Administrator's Manual

0450-0507
Rev. A

We Make It Easy To Communicate

About ESI

ESI (Estech Systems, Inc.) is a privately held corporation based in Plano, Texas. Founded in 1987, ESI designs and builds innovative telecommunications products for businesses like yours. Because of their powerful combination of value and features, ESI products are consistently recognized by industry publications and leaders.

Copyright © 2003 ESI (Estech Systems, Inc.).
IVX is a registered trademark of Estech Systems, Inc. *Ethernet* is a registered trademark of Xerox Corporation. *Motorola* and *ColdFire* are registered trademarks of Motorola, Inc. *Rayovac* is a registered trademark of Rayovac Corporation. *Act!* is a registered trademark of Symantec Corporation. *Goldmine* is a trademark of Goldmine Software Corporation. *Microsoft, Windows, NT* and *Outlook* are registered trademarks of Microsoft Corporation. *Panasonic* and *DBS* are registered trademarks of Matsushita Electric Corporation of America. *Novell* and *Netware* are registered trademarks of Novell, Inc. *Smart Jack* is a trademark of Westell Technologies, Inc.
Information contained herein is subject to change without notice.
ESI products are protected by U.S. Patents No. 6,067,349 and 6,252,944, and others pending.
ESI is an ISO 9001-certified company. Visit ESI on the Web at **www.esi-estech.com**.

Table of contents

Administrator programming: An introduction A.1
Administrator's duties A.1
Telephone system features A.1
Voice mail features A.2
ACD features A.2
Feature Phone overlays A.2
Programming basics A.3
System programming overview A.3
Programming keys A.4
Entering alphanumeric characters A.4
Remote setting of day, night, holiday and auto modes A.5

Function 1: System parameters B.1
Function 13: Administrator password B.1
Function 14: System clock B.1
Function 17: System speed-dial B.3

Function 3: Extension programming C.1
Function 32: Extension feature authorization C.1

Function 5: Voice mail programming D.1
Function 53: Guest/info mailboxes D.1
Function 54: Group mailboxes and the broadcast mailbox D.2
Function 55: Message notification D.3
Function 56: Cascade paging mailboxes D.4
Function 57: Q & A mailboxes D.5

Function 6: Recording E.1
Function 61: Re-record system and auto attendant branch prompts E.1
Function 62: Record directory names E.2
Function 63: Message-on-hold (MOH) programming E.3

Function 7: Reports F.1
Report printing F.1
Reporting functions F.1

SMDR G.1
Tabular SMDR format G.1
CSV SMDR format G.1
Reporting conventions and rules G.2

Index

(This page included for pagination purposes only.)

Administrator programming: An introduction

You can program ESI's **IVX X-Class** system (**IVX 256x** or **IVX 128x**) locally or remotely from a 48-Key Digital Feature Phone or 24-Key Digital Feature Phone while the system is operating. You also can program using ESI's *Esi-Admin*, a *Windows*-based software application your ESI Reseller can provide.

Read the *User's Guide* first. Programming features require a clear understanding of **user** interface and application.

Administrator's duties

The System Administrator can perform the following tasks:

- Administering station assignments
- Managing station feature authorization
- Maintaining the employee directory (if it's used)
- Re-recording system prompts
- Administering manual change of Day/Night mode (if required)

User assistance

Each ESI phone system's **Verbal User Guide** includes all of the information printed in the *User's Guide* (except for special features). Additionally, the ESI system users' Web site, **www.esiusers.com,** includes all the information in the *User's Guide*, and more.

Telephone system features

- **ESI Feature Phones** — Compact and stylish, yet rugged, each 48- or 24-Key Digital Feature Phone includes a high-quality speakerphone, large and informative multi-functional display and a specially designed key layout with several dedicated keys to minimize or eliminate the need to memorize codes. ESI also offers the 12-Key Digital Feature Phone, which is similar in design and basic functions.
- **Extensive help** — ESI's Verbal User Guide™ uses spoken and displayed help prompts to help everyone from the Installer through the Administrator down to the least experienced end user. Help is easily accessible with one press of either the **HELP** key on the 48-Key Feature Phone or the **PROG/HELP** combo key on the 24-Key Feature Phone or 12-Key Feature Phone. One can also visit **www.esiusers.com** for up-to-date help.
- **Enhanced Caller ID** — Allows one-touch automatic message return.[1]
- **Live call recording** — Can record any conversation or personal memo, with moving or copying of any recording to another user's voice mailbox (see "Voice mail features," page A.2).
- **Call waiting** — Includes helpful display, showing both calls' Caller ID information, and easy one-key toggling between calls.
- **Conference calling** — Includes 24 conference bridges, and a conference may contain up to four parties, so the IVX X-Class system can support six conferences of four parties each. Analog phones on the system also may initiate conferences.
- **Esi-Dex™ speed-dialing** — Calls any number using four separate lists (personal, station, system and — when Esi-Link is in use — location); uses Caller ID[1] information or direct keypad entries.
- **Dedicated overhead paging interface** — Allows for external paging through overhead speakers or multi-zone paging units (amplification required).

[1] This and all other references to Caller ID service within this manual assume the end-user organization subscribes to Caller ID service from its telephone service provider.

- **911 alert** — Provides immediate line access if any station dials **9 1 1** to report an emergency; sends a message via the serial port indicating the start date, time, station number and end-time of the 911; also sounds an audible warning at the operator station and displays, for example:
  911 CALL FROM
  X102 JOHN JAMES

> **Important:** **Don't** make 911 calls using **Remote** IP Feature Phones. Because a Remote Phone isn't connected directly to its local telephone network, one must use a regular phone connected locally, not the Remote Phone, to make 911 or other emergency calls. (For more information, see the documentation included with the Remote Phone.)

- **Status indicator lamp** — Indicates three conditions of the 24- or 48-Key Digital Feature Phone: off-hook, ringing and new voice mail message.
- **Esi-Link support** — Allows an multi-site enterprise to network any combination of up to 100 compatible ESI phone systems (or ESI IP Gateways) across an IP-based network.
- **NSP (Network Services Processor)** — Allows system programming via TCP/IP and can be adapted to fit a variety of phone system configurations, small to large.
- **Optional *VIP*™** — Works with the NSP to provide an optional, value-added interface to IVX X-Class. Delivers call control and unified messaging to *Microsoft® Outlook® 2000/2002/2003*.

Voice mail features

- **Eight message-on-hold recordings** — Among these are three prerecorded tracks; also supports live entry.
- **Message Recycle Bin** (undelete) — Remembers, and can restore, each mailbox's 10 most recently deleted messages
- **Quick Groups**™ — Makes it easy to leave voice mail messages for several users.
- **Quick Move**™ — Records a conversation into another user's mailbox.
- **Virtual Mailbox Key**™ allows easy monitoring of a second mailbox.

ACD features

- **Routes calls within designated departments for quickest possible call answering.**
- **Uses Digital Feature Phone display** to provide up-to-the-second information on queues and wait times.

Feature Phone overlays

Each ESI Feature Phone comes with one overlay for the programmable feature keys. To order additional overlays, visit the DESI™ Web site at *www.desi.com*. You can also download the free *Windows®*-based software, *DESI Lite*, which allows you to print on the overlays. For assistance with DESI products, please consult the DESI Web site.

> **Tip:** Remember that ESI's *Esi-Access* software, available from *www.esiresellers.com*, also lets you print on the overlays as well as perform many other programming tasks.

Programming basics

As mentioned earlier, you may program from **any** ESI 48-Key Digital Feature Phone or 24-Key Digital Feature Phone in the system. Here's how:

1. Press **PROGRAM**. The normal **station** programming menu prompt will begin to play. Press **HOLD** to stop the prompt.
2. Enter the Administrator password[1], followed by #. **You are now in programming mode** (during this time, the extension will be automatically placed in DND).
3. Follow the **system** programming menu to program as you wish; and, when finished, hang up.

> **Note:** The system will automatically exit programming mode after 10 minutes of inactivity.

> **Example:** If your Administrator password is *864*, **enter** programming mode by pressing
> **PROGRAM HOLD 8 6 4 #**
>
> (To **exit** programming mode, hang up.)

System programming overview

Once you've accessed programming mode on an appropriate ESI Feature Phone, the system will prompt for — and confirm — each keystroke action via voice commands and the display. You program both configuration data and recordings in the same manner.

> **Important:** During programming, the 24-Key Feature Phone's two-line display shares the same content with the top two lines of the 48-Key Feature Phone's three-line display. Therefore, to save space, this manual's sample displays show only two lines.
> **Don't** program using a **12**-Key Feature Phone; its single-line display cannot show some information you'll need during programming.

The following menu shows Administrator programming functions available on the IVX X-Class system:

1 System parameters
- 13 Administrator password
- 14 System clock
  - Set time/date
  - Automatic time setting
- 17 System speed dial

3 Extension programming
- 32 Extension feature authorization

5 Voice mail programming
- 53 Guest/info mailboxes
- 54 Group mailboxes
- 55 Message notification options
  - 551 Station delivery options
  - 552 Delivery/paging parameters
- 56 Cascade paging mailboxes
- 57 Q & A mailboxes

6 Recording
- 61 Record system prompts
- 62 Record directory names
- 63 MOH programming
  - 631 MOH source
  - 632 Record MOH
  - 633 MOH volume

7 Reports
- 74 Voice mail statistics report
- 75 System speed-dial list

[1] Default is **4 5 6**.

Programming keys

During programming, the first line of the display will show the current **item** being programmed, and the second line will be the **entry** line. You can enter values as directed by the combination of the voice prompts and display. To enter multiple values, such as a list of extension numbers, separate each value by # (to exit the list, enter # #).

To...	Press ...	What this does
Enter	#	Confirms new or existing entry and advances to next programming step.
Back up (*i.e.*, reverse direction)	*	Backs up to previous prompt without changing its value.
Delete	**HOLD**	Deletes data or recording.
Exit	[Hang up]	Exits programming mode and removes extension from DND.
Help	**HELP**	Provides more detailed instructions during programming.
Select/scroll	▼ *(left-side scroll key)*	• During entry of a value, backs up. • If a list is present (">" is displayed), scrolls to left.
	▲ *(right-side scroll key)*	• Selects from options presented. • If a list is present (">" is displayed), scrolls to right. • Inserts a space during entry of a name.

Note: Either **<** or **>** in the display indicates that additional choices or values are available by pressing a corresponding scroll key (▼or ▲).

Entering alphanumeric characters

You enter names for **extensions** and **departments** by pressing the dial pad key that corresponds to the character to be entered. The key's possible entries will change each time the key is pressed, and the display will show this. When the desired character appears on the display, press # to confirm; the cursor will move to the next character position. You may move the cursor left (to correct an entry) by pressing the left scroll key (▼) or move right (to add a space) by pressing the right scroll key (▲).

Key	Options
0	0, - (hyphen), _ (underline)
1	Q, Z, 1, "_" (space)
2	A, B, C, 2
3	D, E, F, 3
4	G, H, I, 4
5	J, K, L, 5
6	M, N, O, 6

Key	Options
7	P, R, S, 7
8	T, U, V, 8
9	W, X,Y, 9
▼ (left scroll key)	Backs up and erases
▲ (right scroll key)	Adds a space
#	[Enter]
# #	Ends the name

Example: To enter a *B*, press **2** twice (the possible options to scroll through are **A, B, C** and **2**). When **B** is displayed, press # to confirm; the cursor will move to the next character to be entered. To complete the name, press # #.

System fixed numbering plan

Numbers	Function
0	Operator
1–84	CO lines
100–267	User extensions
280–299	Department numbers
300–489	Guest/info mailboxes
490–499	Q & A mailboxes
500	Broadcast mailbox
501–516	Group mailboxes
520–529	Cascade paging mailboxes
530–550	Recordable system prompts
551–589	Feature codes
590–598	MOH recordings
599	Overhead paging port
600–699	System speed dial
700–799	Esi-Link locations
988	Modem

Remote setting of day, night, holiday and auto modes

Normally, the system's day/night mode operation will be manually controlled at an ESI Feature Phone and/or set to follow the day/night mode tables (programmed by the Installer) automatically. In addition, the Administrator can remotely change the mode and/or re-record the holiday greeting to handle unexpected closings such as for inclement weather.

Remotely logging into the system with the Administrator password lets the caller re-record the ID 1 greetings (day, night, day2 and night2) and the holiday greeting, as well as change the mode to day/night/holiday/day2/night2 (or auto).

1. At the main greeting, enter ✱ ✱ **4 5 6** # — or ✱ ✱ [the new password] # — to enter remote programming mode.
2. You'll hear prompts that will allow you to change the answer mode (day, night, day2, night2, holiday or auto) and/or to re-record the holiday greeting and the main greeting (ID 1). Follow the prompts to perform the desired operation.
3. Exit by pressing ✱ and hanging up.

(This page included for pagination purposes only.)

Function 1: System parameters

Function 13: Administrator password

These functions will display the existing password and prompt for entry of a new password. The passwords can be 2–8 digits long, followed by #. **The Installer can change either the Installer or Administrator password. Only those functions listed in the *Administrator Manual* can be programmed via the Administrator password.** The default Administrator password is **4 5 6**.

> **Notes:** You can use the Administrator password to access a user's station programming. At the station, when prompted for the user's password, enter either the Administrator password, then follow normal user programming procedures.

Accessing user station programming

Should a user forget his password or if an employee leaves the organization, this feature allows the Installer or Administrator to enter a user's station programming and operate within it as if he were the user. From the user's station, enter the **Administrator** password when the system prompts for the **user** password.

> **Example:** From station 105, entering **4 5 6 #** instead of the user password (**1 0 5 #**) will enter the station's user programming. (Default password shown for this example).

Function 14: System clock

Function 141: Set time/date

1. Enter a new time in a **twelve**-hour format.

> **Example:** Enter **1 2 3 3** for *12:33*, or **3 1 5** for *3:15* (note that you need **no** leading zero for the time).

2. Select AM or PM by pressing a scroll key (either ▼ or ▲).

3. Enter a new date in an **eight-digit** format, **including** leading zeroes.

> **Example:** Enter **0 7 0 4 2 0 0 3** for July 4, 2003 (note that leading zeroes **are** required here, unlike in Step 1).

4. Press # to finish the entry.

> **Note:** A built-in battery maintains the correct time and date, even in the event of a power loss.

Function 142: Automatic time setting

1. Synchronize with CID

This function, when enabled, synchronizes the real-time clock with Caller ID (CID) messaging: call processing compares the time of a CID message to the system real-time clock and, if the difference is more than two minutes, resets the real-time clock to match the time (hours and minutes) of the CID message. The system will analyze each such message (or — if it receives more than four calls with CID information within a one-minute period — as is needed). Select *ENABLE* or *DISABLE* by pressing a scroll key (either ▼ or ▲). Choosing *ENABLE* will allow the CID data to update the time and date.
Default: Enabled.

> **Notes:** If this function is enabled, Esi-Link time synchronization (from location 700) will be disabled.
> If this function is disabled, Esi-Link time synchronization will be allowed (minutes only).

2. Adjust for Daylight Savings Time

This function, when enabled, causes the real-time clock to adjust itself automatically for Daylight Savings Time (DST). Select *AUTO* or *DISABLE* for DST by pressing a scroll key (either ▼ or ▲). Choosing *DISABLE* is best for those areas that don't observe DST.
Default: Disabled.

> **Note:** If this function is enabled and it causes an automatic time change, the system won't update the real-time clock from either Caller ID messages (Function 1421, *above*) or Esi-Link time synchronization for 25 hours before and 25 hours after the time change is due to be effective (*i.e.*, 2:00 AM Sunday).

Function 17: System speed-dial

Up to 100 system speed dial names and associated numbers can be stored, in location numbers 600–699, for access by any station. A user can initiate a system speed-dial by dialing the speed dial location number or by accessing the name through the Esi-Dex feature. In Function 32, access to system speed-dial can be denied to individual stations (see page C.1).

> **Note:** System speed-dialing overrides toll restrictions (Function 32, page C.1).

1. Enter the 3-digit location number to program,
2. Enter a **ten-character** name (see "Entering alphanumeric characters," page A.4).
3. Enter the number to be dialed (including the line group 9, 8, or 71–76). Press the left scroll key (▼) to delete any character or digit entered in error. Here's an example:

1.	2.	3.
Speed-dial number	**Name**	**Number**
601	AUTO RENTL	915552221212

The number dialed in Step 3 can be up to 30 digits long **including** the following special codes:

Code	What it produces
#	# DTMF tone
*	* DTMF tone
F	Flash hook
P	2-second pause

Use the ▲ scroll key to enter special characters; use the ▼ scroll key to backspace. Press **#** to confirm the inserted character and continue. Press **# #** to complete the entry.

> **Example:** To create a System Speed Dial number that dials *9*, then *972-555-5644*, then pauses for four seconds and finally dials *#104*, enter:
>
> **9 9 7 2 5 5 5 5 6 4 4** (then scroll to) **P #** (then scroll to) **P #** (then scroll to) **# #** **1 0 4** #

Deleting a speed dial number

To delete an entire speed dial number and name, delete the location number (**6 X X**) by pressing **HOLD** or the left scroll key (▼) during Step 1 in the speed-dialing procedure described above.

(This page included for pagination purposes only.)

Function 3: Extension programming

> **Important:** Where any **gray shading** (▒) appears in an example, it represents values either **unavailable** to the function or **unused** in the particular example.

Function 32: Extension feature authorization

An Administrator can allow or deny many extension features on an extension-by-extension basis. A user, however, can only program and use allowed features (by using a combination of voice and display prompts) from his/her phone.

Below is an example of a completed Programming Worksheet. The programming sequence is:

1. Ext.	2. Name	3. Call wait	4. DND	5. AA block	6. Rec.	7. Svc. obs.	8. Toll allow	9. Sys. spd. dial	10. Auto-Page	11. Ext. fwdg.	12. Fwdg. to toll nos.	13. Trunk-to-trunk xfer	14. Unified msg.
XXX	Default	Y	Y	N	Y	N	Y	Y	Y	Y	N	Y	N
100	Jane	Y	Y	N	Y	N	Y	Y	Y	N	N	N	N
101	Roger	Y	Y	N	Y	N	Y	Y	N	N	N	N	N
102	Sally	Y	Y	N	N	N	Y	Y	Y	N	N	N	N
110*	Bill	Y		N			Y	Y	N	N	N	N	

The programming steps are:

1. **Extension number** — Enter the extension number to program.
2. **Extension name** — Name the extension (if it hasn't previously been named by the Installer).

For each of the following features, press a scroll key (▼ or ▲) to select *YES* or *NO*.

3. **Call waiting** — Allows the user to turn call waiting on or off for his station.
4. **Do not disturb** — Allows the user to activate DND from his station.
5. **Auto attendant block** — Blocks calls from being transferred to the station from the auto attendant; follows the extension's call forward day/night as programmed by the Installer.
6. **Live recording feature** — If enabled, will allow the user to record conversations.
7. **Service observing** — Allows the user to monitor the conversations of those stations listed in the **service observing list** for his/her station. If this is enabled, you must enter a list of allowed extensions.

   > **Note:** A Department number can be entered as an extension in the Service Observing list and will then automatically include all members of the Department even if the members of the Department are later changed.

8. **Toll restriction** — "YES" allows the user to place toll calls. If you select "NO," the user can make only either non-toll calls or calls to numbers listed in the allow exception table.
9. **System speed dial** — "YES" allows the user to access and place system speed dial calls.

(Continued)

* An example of an analog phone.

10. AutoPage — Lets the user turn AutoPage *(defined below)* on or off at his/her station.

> **Note:** This feature is used in conjunction with the directory names recorded in Function 62 and is not active until a directory name is recorded for the extension.

If the station user has his/her mailbox set to answer with personal greeting 3 and a caller presses **3** to page that user, this feature automatically pages the station user in the page zones entered in Function 31. If no page zone is entered, all IVX Digital Feature Phones on the system are paged.
Default: Enabled.

> **Note:** When AutoPage is enabled, the IVX X-Class system will use the last installed idle digital port to perform the page. Therefore, if a phone is on the last installed port, the phone's user may experience a brief delay in telephone operation if he/she picks up the handset (or presses **SPEAKER**) **during** the AutoPage.

11. External forwarding — Allows the station user to enable the off-premises-"reach-me" feature. This feature allows a caller who has been forwarded to a voice mailbox to be transferred to an outside caller. See the *ESI Feature Phone User's Guide* (#0450-0366) for more information about the off-premises "reach-me" feature.
Default: Enabled.

> **Note:** After the system dials the external forwarding number, it will play a prompt saying, *"You are receiving a forwarded call. Press any key to accept."* This prompt will play continuously for 30 seconds. If the forwarded call is answered and the called person dials a digit, the forwarded call will be connected to that person. If no digit is dialed, the caller is automatically forwarded to voice mail. While the two lines (trunks) are connected, the system constantly monitors the line for open loop conditions (hang-up). If an open loop is detected on either line, the call is disconnected. The system also monitors for voice activity on the connected lines; if voice is no longer detected, the call is disconnected. Finally, if both lines are connected for more than 60 minutes[1], the call will be disconnected.

12. Forwarding to toll numbers — This feature is used in conjunction with external forwarding (see previous item). When enabled, this feature lets the user program a long-distance number for external forwarding.
Default: Disabled.

(Continued)

[1] Default timer setting. To adjust this, contact ESI Technical Support.

13. Trunk-to-trunk transfer — When enabled, this lets the station user initiate a **trunk-to-trunk transfer.** The user, while connected to a CO line, can press **TRANSFER**, dial an off-site number and then complete the trunk-to-trunk transfer by simply hanging up. Both outside parties are then connected. **Default:** Enabled.

> **Important:** USE OF FEATURES, SUCH AS TRUNK-TO-TRUNK TRANSFER, THAT REQUIRE TRUNK-TO-TRUNK CONNECTIONS WILL INCREASE THE RISK OF TOLL FRAUD. IN NO EVENT SHALL ESI (ESTECH SYSTEMS, INC.) BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER INCLUDING, BUT NOT LIMITED TO, FRAUDULENT TOLL CHARGES, LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTIONS OR ANY OTHER COSTS OR DAMAGES RELATED THERETO ARISING FROM THE USE OF THESE FEATURES.

14. Unified messaging — Allows or denies *Esi-Mail* or *VIP* access. (For more information about *Esi-Mail* and *VIP*, consult your ESI Reseller.)

Example: Here is a portion of a completed Programming Worksheet for extension feature authorization. Note that:

- Extension 100 cannot record calls but **can** make toll calls (except those listed in the deny table) and can access the system speed dial numbers.
- In comparison, Extension 102 cannot make general toll calls but also can call any system speed dial number, **even if it's a toll call**.
- (Extension 112 doesn't have DND, AA block, record or service observing capability because it's an analog port.)

1. Ext.	2. Name	3. Call wait	4. DND	5. AA block	6. Rec.	7. Svc. obsv.	8. Toll allow	9. Sys. spd. dial	10. Auto-Page	11. Ext. fwdg.	12. Fwdg. to toll nos.	13. Trk-to-trk xfer	14. Unified msg.
100	Jane	Y	Y	N	N	N	Y	Y	N	N	N	N	N
102	Sally	Y	Y	N	Y	N	N	Y	Y	N	N	N	N
112*	Bill	Y		N			Y	Y	N	N	N	N	

* An example of an analog phone.

(This page included for pagination purposes only.)

Function 5: Voice mail programming

To simplify initial installation, all programmed extensions will automatically have the generic personal greeting, *"You have reached the mailbox for extension* [xxx]*."* The mailbox user should replace this with a personalized greeting. Each guest/info, group, cascade paging or Q & A mailbox must have a greeting recorded for the IVX X-Class system to consider the mailbox active.

> **Important:** A mailbox will not receive broadcast messages until a greeting has been recorded for it. Additionally: if the default greeting is deleted, the mailbox will be considered inactive.

Function 53: Guest/info mailboxes

Mailboxes numbered 300–489 can be programmed as either a guest or info mailbox. Enter the mailbox number and select *Guest* or *Info* by pressing a scroll (▼ or ▲) key.

Guest mailboxes

Guest mailboxes are designed to be used by personnel, such as in outside sales or manufacturing, who don't have an extension assigned to them. A guest mailbox requires no programming other than the assigning of a name. The maximum recording length is controlled by Function 51; the default is 10 minutes.

> **Notes:** A guest mailbox can be handled like a regular extension (*i.e.,* listed in the directory, assigned a station key, etc.), and is password-protected by default.
>
> Guest mailboxes do not support either AutoPage or off-premises "reach-me."

Default: 300–489 as guest mailboxes.

Info mailboxes

Info mailboxes can be used to give callers information on a variety of different subjects by "publishing" these mailbox numbers. Info Mailboxes are identical to Guest Mailboxes except that the caller will not be given a record tone after the personal greeting (the information to be played). Instead, the caller will be forwarded as programmed in this function (default is the caller will be disconnected after the information is played). The maximum length of the record time is 14 minutes. Guest/info mailboxes are created or deleted here, but are turned "on" only when a personal greeting (the information to be played) has been recorded. Deleting the personal greetings will turn "off" the mailbox.

To record a greeting, press **PROGRAM** ✻ and the mailbox number; then press # to confirm, and follow the prompts; the default password is the mailbox number.

Below is an example of a completed Programming Worksheet, showing the sequence of programming:

1.	2.	3.	4.	5.
MB	**Name**	**Type**	**CF day**	**CF night**
400	Dana	Guest		
402	Literature	Info	MB 302	MB 302

Each programming step is defined as follows:

1. **Mailbox number** — Enter a mailbox number, 300–489.
2. **Name** — The mailbox name is used for the display, reports, and as a programming aid. The name length can be no longer than 10 characters (see "Entering alphanumeric characters," page A.4).
   Default: The Mailbox number.
3. **Type** — Select a mailbox type: Guest or Info.
   Default: Guest.
4. **and 5. Call forward** *(info mailbox only)* — An info mailbox can be set to call forward after the personal greeting has played to an extension, department, a mailbox or a branch ID for day mode and differently for night mode.
   Default: ID9999 (automatic disconnect).

Function 54: Group mailboxes and the broadcast mailbox

Broadcast mailbox

Mailbox 500, the **broadcast mailbox,** is a special group mailbox which can be used to leave messages for all of the system's station users (extensions 100–183) who have recorded a personal greeting. The broadcast mailbox's user list cannot be edited. Guest mailboxes are not included in the broadcast group.

Group mailboxes

You can assign up to 16 group mailboxes (501–516) to the IVX X-Class system; each group mailbox can have up to 32 members. Anyone who knows the password can leave messages for all users listed as members of that group and who have recorded a personal greeting. The Installer, Administrator or group mailbox "owner(s)" may set or change the list of Group Mailbox members. To record a greeting, press **PROGRAM** ∗ and the mailbox number; then press # to confirm, and follow the prompts. The default password is the mailbox number.

Important: A group mailbox is turned "on" (able to record and playback messages) **only** when its "owner" has recorded a greeting for it, such as *"This is the group mailbox for East Coast Regional Sales."* Similarly, deleting the group mailbox greeting will turn "off" the group mailbox; any outstanding messages will remain in its members' mailboxes until erased by each member.

Notes: If *0* (zero) is programmed as the password, **anyone** can leave group messages or program the Group Mailbox.
If a user saves a group message, it will be saved as a new message.

1. MB	2. Group member mailboxes' numbers
501	102 104 106 107 122 303 314

Here is the programming sequence:

1. **Enter the group mailbox number** — Range: 501–516.
2. **Enter group member mailboxes' numbers** — Separate each by #; enter # # to end the list.
   Range: User mailboxes (100–183) and guest mailboxes (300–489).

Function 55: Message notification

On a mailbox-by-mailbox basis for user or guest mailboxes, the system can be programmed to call an off-premises number or another extension to deliver messages and/or dial to an external commercial paging network to activate a user's pager. The IVX X-Class system will call and/or page when the first new message has been left in a mailbox and will repeat (at the interval of minutes programmed in this function) until the new message(s) have been deleted, saved or moved.

The user can program the numbers and delay and can also select to have only messages marked as urgent delivered.

The Installer and Administrator can set, on an individual-station basis:

- The number to be called
- A delay period
- The number of attempts (maximum of 99)
- The interval between attempts
- A "quiet period" to suspend phone delivery — *e.g.*, late at night (the quiet period is an on-and-off time that applies to all days of the week)

Function 551: Station delivery options

Programming of the station options, as shown below, can be performed by the Installer or Administrator. In addition, the user can change his phone number and pager number (but not phone or pager delay time). The phone number's maximum length is 24 digits.

	1. Number	2. Delay	3. Attempts	4. Interval	5. Quiet on	6. Quiet off
1. Phone	9725556789	30	6	60	10:30PM	7:15AM
2. Pager	9725551234	0	10	30		

To program, enter the extension number to program and select phone or pager to program. Then, enter:

1. **Phone/pager number** — The number to be dialed (**without** the CO line Group *[9, 8* or *71–76).*
2. **Delay** — How many minutes the system is to wait before dialing the phone or pager number. This allows the user to pick up a message if he is in the office.
   Range: 0–500. **Default:** 0.
3. **Attempts** — How many times that the system will call/page.
   Range: 0–99. (0 turns off delivery.) **Default:** 3.
4. **Interval** — How many minutes should elapse between attempts.
   Range: 10–1440. **Default:** 30.
5. **Quiet period on** — When the quiet period should begin.
   Default: (None.)
6. **Quiet period off** — When the quiet period should end.
   Default: (None.)

Use the ▲ scroll key to enter special characters; use the ▼ scroll key to backspace. Press # to confirm the inserted character and continue. Press # # to complete the entry.

Function 552: Delivery/paging parameters

The sequence of programming is as follows:

1. **CO line access** — Enter the CO line group (9, 8, or 71–76) that is to be accessed for delivery. **Default:** 9.
2. **Maximum lines** — Enter the maximum number of lines (in the selected CO line group) that the system can access simultaneously. Make enough lines available to accommodate high notification traffic (but be careful: if you make available **all** lines in the selected line group **and** high notification traffic occurs, the system could tie up all lines).
   Range: 1–19. **Default:** 1.
3. **Pager dialing pause** — When paging, the IVX X-Class system will send the mailbox number to be shown in the pager's display. To allow time for the paging service to answer, enter the pause, in seconds, to occur between when the IVX X-Class system dials the pager number and when it then dials the mailbox number.
   Range: 0–20. **Default:** 6.

Function 56: Cascade paging mailboxes

In addition to individual mailbox paging, the IVX X-Class system can support up to 10 cascade paging mailboxes (520–529). These can be assigned to anyone who requires escalating levels of paging beyond the single level available in all user mailboxes. In this function, you program the paging numbers and number of times each is to be paged before the next paging number is added; additionally, the mailbox owner can program these settings. To record a greeting, press **PROGRAM** ✳ and the mailbox number; then press # to confirm, and follow the prompts. The default password is the mailbox number.

Cascade mailbox options

The user can program up to three paging numbers, of up to 24 digits each, to be paged whenever the mailbox takes a new or urgent message. The system will page the first paging number (for the number of times listed), then add the second paging number (for the number of times listed), then add the third paging number and will continue to page all three pagers until the message has been retrieved.

1. MB	2. 1st Number	3. Attempts	4. 2nd Number	5. Attempts	6. 3rd Number
520	9725553232	2	9725554254	3	9725555452

To program this, enter:

1. **The mailbox number** — **Range:** 520–529. [Then press **1** to enter number programming, and proceed to Step 2.]
2. **First pager number** — The number to be dialed (**without** the CO line Group *[9, 8* or *71–76]).*
3. **Attempts** — How many times the system will page (up to 20) before adding the second pager number. **Range:** 0–99. (0 turns off delivery.)
4. **Second pager number** — The number to be dialed (**without** the CO line Group *[9, 8* or *71–76]).*
5. **Attempts** — How many times the system will page (up to 20) before adding the third pager number. **Range:** 0–99. (*0* turns off delivery.)
6. **Third pager number** — The number to be dialed (**without** the CO line Group *[9, 8* or *71–76]).*

Use the ▲ scroll key to enter special characters; use the ▼ scroll key to backspace. Press # to confirm the inserted character and continue. Press # # to complete the entry.

Cascade paging parameters

The cascade paging mailboxes will use the same CO line group and pager dialing pause as programmed in Function 552 (see page D.4).

Paging interval

To program the paging interval parameter for a cascade paging mailbox:

1. Enter the mailbox number *(520–529)*.
2. Press **2** to set parameters for the mailbox.
3. Enter the number of minutes for the interval between attempts.
   Range: 10–1440. **Default:** 0.

> **Note:** Once you change this setting from *0*, you cannot reset it to *0*.

Function 57: Q & A mailboxes

You can create up to 10 **question and answer (Q & A) mailboxes** (490–499). Each Q & A mailbox owner can record up to 10 questions. The questions are recorded in the same manner as recording users' multiple personal greetings (see *User's Guide*). The individual answer segments recorded by the caller are stored as a single message, with the answer segments separated by short beep tones. Each answer segment's maximum length will be as programmed by the Installer. Normal message handling capability — delete, save, etc. — applies to the entire message (all segments).

The caller, when recording each answer, can be instructed to conclude by pressing **1** or to pause for the next question (the system advances when it detects either a 3-second period of silence or the pressing of **1**) — *e.g., "Record your name at the tone and press 1 when finished"… "Record your address at the tone and press 1 when finished."* If the caller fails to respond to two questions in a row, the system disconnects the call.

> **Important:** This programming creates or deletes Q & A mailboxes, but these mailboxes are turned "on" **only** when the mailbox owner has recorded questions. Similarly, deleting all questions turns "off" the mailbox.

To record questions, press **PROGRAM** ✻ and the mailbox number; then press # to confirm, and follow the prompts. The default password is the mailbox number. Here is an example of a completed programming worksheet (numbers correspond to steps below):

1. MB	2. Name	3. CF day	4. CF night
490	Employment	MB 490	MB 490
491	Survey	MB 491	MB 491

Each programming step is defined as follows:

1. **Mailbox number** — Enter a mailbox number 490 to 499.
2. **Name** — The mailbox name is used for the display, reports, and as a programming aid. The name length can be no longer than 10 characters (see "Entering alphanumeric characters," page A.4).
   Default: The mailbox number.
3. **& 4. Call forward** — A Q & A mailbox can be set to call forward, after the last question has been answered, to an extension, department, a mailbox or a branch ID for day mode and differently for night mode.
   Default: ID9999 (automatic disconnect).

> **Tip:** If you need a Q & A mailbox with more than 10 questions, set the call-forwarding to **another** Q & A mailbox.

(This page included for pagination purposes only.)

Function 6: Recording

Function 61: Re-record system and auto attendant branch prompts

The IVX X-Class system plays the **system prompts** to an outside caller at different points in the call routing or mailbox functions. These system prompts have been pre-recorded at the factory but you may re-record them, if preferred — *e.g.,* in a different voice or with different instructions.

The **auto attendant branch prompts** (such as the main greeting or sub-menus) are also recorded here — enter the branch ID number as the prompt number.

For both system prompts and branch prompts, the maximum record length is five minutes per prompt.

Recording a prompt

1. Practice the prompt by recording and re-recording (start and stop by pressing **1**).
2. When satisfied with its quality, press # to confirm.

> **Note:** Deleting a system prompt by pressing **HOLD** (instead of #) restores to the default recording.

System prompts

- **Busy Prompt: 530** — Plays to the outside caller if an extension is busy.
  Default: *"That extension is busy."*
- **No Answer Prompt: 531** — Plays to the caller if an extension does not answer.
  Default: *"That extension does not answer."*
- **Hold Prompt: 532** — Plays to the caller who makes a menu selection or enters an extension number.
  Default: *"One moment, please."*
- **Q/Z Prompt: 534** — Plays to a caller who has selected an alphabetic directory; instructs the caller to press **1** for the letters *Q* or *Z* since these two letters do not appear on the phone keypad; plays at the end of the first directory prompt (but only if a name in the directory starts with a *Q* or *Z)*.
  Default: *"For the letters* Q *or* Z*, use key number 1."*
- **No Names Matched Prompt: 535** — Played to the caller if, in a directory branch, the first letter he/she selected does not have any names associated with it, or if he/she has listened to all of the names played and has not made a selection. After playing the prompt, the IVX X-Class system forwards the call to the extension, branch or mailbox as programmed in call forward no response.
  Default: *"No names matched; one moment please."*
- **End of Message Prompt: 537** — Plays after a caller leaving a message presses **1** to stop recording; the prompt then tells the caller his/her options.
  Default: *"To continue this recording, press 1; to return to the main menu, press 8; or, if finished, press* ✻ *and hang up."*
- **ACD Queue Prompt: 538** — The first prompt played to a caller when all extensions are busy in an ACD department.
  Default: *"All agents are currently assisting other customers. Please hold; your call will be answered in the order received."*
- **ACD Hold Prompt: 539** — Is periodically played to callers on hold in an ACD department when all extensions are busy.
  Default: *"All agents are still busy assisting other customers. Please hold; your call will be answered in the order received."*

(Continued)

- **Holiday Main Greeting Prompt: 540** — Plays to callers when the system has been manually placed in holiday mode.
  Default: *"Thank you for calling. Our office is closed in observance of the holiday. You may dial your party's extension, at any time, or please call back during regular business hours."*

> **Note:** While in holiday mode, IVX X-Class follows night mode programming for call routing. The day/night mode setting and holiday greeting can be activated remotely (see "Remote setting of day, night and holiday modes," page A.5).

Function 62: Record directory names

This function is accessible only if a directory branch has been created as part of auto attendant programming. Enter the extension number and record the name. If this is a by-alpha branch, the system will automatically set the name key using the name assigned in Functions 31, 33, or 53; if necessary, enter a different name key.

> **Important:** Make photocopies of the blank worksheet for preparing directories and making future changes. As names change, you can enter this function and change any field.

1. Ext.	2. Recorded name	3. Key
102	George Straite	**4 3 6**
113	Janet Smith	**5 2 6**

Each programming step is defined as follows:

1. **Extension number** — Enter the extension number for the directory name.
2. **Record name** — Press **1** to begin recording and press **1** again when finished.
3. **Name key** — (Necessary if the directory type is by-alpha [for more information, contact the Installer.) Enter the numeric equivalent to the letters appearing on a phone keypad (for Q or Z, use *1*). Up to three numbers may be entered.

A by-alpha directory branch allows the caller to be connected to a system user by selecting his/her name from a directory. The by-alpha directory has two prompts: the first instructs the caller to enter the first **three letters** of the individual's first or last name; the second instructs the caller to press # when he/she hears the desired individual's name. The system then plays the matched names to the caller, in alphabetical order.

With the name key set to three digits, when a caller selects a directory branch and dials only one or two digits to select a name, the system will wait three seconds for the entry of another digit. If the system receives no other digit within that time, the auto attendant will begin to play, in alphabetical order, the subset of directory names bounded by the digits dialed.

> **Examples:** Caller dials **5** and waits three seconds. The system plays names beginning with *J, K,* and *L*.
>
> Caller dials **3 2** and waits three seconds. The system plays names beginning with *DA* through *FC*.
>
> Caller dials **7 7 2**. The system plays names beginning with *PPA* through *SSC*.

If a user dials **more** than three digits, the system ignores the additional digits (except for the # key, which signals the directory to connect the caller to the extension or department associated with the directory entry that's playing).

> **Note:** To re-record the prompt that says, "Enter the first three letters of the person's last name," you must enter Function 61 and then enter the ID number of the directory branch.

Function 63: Message-on-hold (MOH) programming

MOH can be:

- A live feed from an external music source connected to the **MOH** connector located on the side of the cabinet.
- One of three default, generic MOHs pre-recorded by the factory.
- One of up to five custom MOHs loaded into the system by using a cassette recorder connected to the MOH connector.

> **Note:** If ACD is used, we recommend that you use Prompt 590, Prompt 591 or a custom prompt without periodic "voice-overs," since the ACD Hold Prompt **also** will be played while a caller is on hold.

Function 631: MOH source

This selects the source for the system (or only tenant 1, if tenant service is enabled) that will be played to callers on hold.

Code	Source
590	Live external source*
591	Pre-recorded music
592	Pre-recorded with *"please continue to hold"*
593	Pre-recorded with *"dial 0 or extension from hold"*
594–598	Customer-recorded message on hold

* Dialing off-hold doesn't work (can still dial off greetings and announcements).

Default: 592 (generic message-on-hold).

> **Note:** MOH source isn't selectable for tenant 2. If tenant service is enabled, source 596 is the only available customer-recorded source for CO calls placed in hold by stations assigned to tenant 2. However, if source 596 hasn't been recorded, the default, generic MOH source (592) will be played, instead.

Function 632: MOH recording

1. Connect the message/music source to the MOH port on the side of the cabinet.

   > **Note:** The connector is monophonic-only — if you use a stereo source, you must either set it to output mono, if possible, **or** use a stereo-to-mono conversion cable (or adapter).

2. Enter the prompt number to be recorded.
3. Press **1** to begin recording. To aid you in queuing, the source will be played through the phone's speaker.

   > **Note:** The recorded material should not have a "beginning" or "end" — so that playback can loop continuously. The maximum record length is controlled by the amount of space available on the Memory Module.

4. Press **1** when finished. The recording will play back so you can review it.
5. Press # to accept the recording. (To delete it, press **HOLD**.)

Function 633: MOH volume

If a custom MOH is recorded, the output volume can be adjusted in this function.
Range: 1 (faint)–12 (loudest).
Default: 6.

Notes: If an external audio source such as a radio is used for MOH, adjust the volume at the source.
To turn **live** MOH volume completely off, turn off volume at the source.
To turn **recorded** MOH volume completely off, select (in Function 631, *above*) one of the prompts in the range of 594–598, but make sure it's blank. These prompts are blank by default; if you have recorded some audio on all of them, just select one and record a few seconds of silence.

Function 7: Reports

Important: You may wish to read "SMDR" (pp. G.1–G.2) before using this function.

Report printing

The system's built-in reports can be output to a printer or a PC via the **Maintenance/SMDR** port.

When printing captured reports from the PC to a laser printer, use a fixed monoproportional font (such as Andale Mono, Courier New or Letter Gothic), 9 points or smaller.

From either the Installer or Administrator programming menu, select the desired report as shown in Functions 71, 74 and 75 *(below).* The reports can be printed with either: (1) the data saved for inclusion in future reports, or (2) the data and totals cleared. (You **can't** clear data in either the system program report or the system speed-dial report.)

Note: Outbound calls shorter than one minute are not counted in system totals.

Reporting functions

- **Function 71: System program report** — Provides a hard copy of the system's current programming. Compare this vs. the programmer's worksheet to verify the accuracy of the programmed data.
- **Function 73: ACD department detail report** — (See below.)
- **Function 74: Voice mail statistics report** — Provides statistics indicating the message activity in each mailbox since the data was last cleared.
- **Function 75: System speed-dial list** — Lists the current system speed-dial numbers. Distribute a copy to those who are authorized to use them.

Function 73: ACD department detail report

The ACD department detail report provides extension usage by ACD department. This report includes the following "fixed" information:

- All ACD departments will be included.
- The current report's **start** date and time will be the previous report's **end** date and time.
- The current report's **end** date and time will be the current date and time.

Function 73 offers two choices:

1. **Current report** *("Press **1** to print the current ACD report")* — Outputs the current ACD department report. All information is automatically copied to the previous report (see next choice) and cleared from the current report.
2. **Previous report** *("Press **2** to repeat the previous ACD report")* — Re-sends the last report printed.

Note: After the current report is requested, it will be stored indefinitely (as the "previous" report) until the next "current" report is selected.

Sample Function 73 report

```
ACD Report by Department, Current                                    Page  1
Department Detail              Dept: 291, TRAINED (A)
      Start: 12/15/2003  17:07          End: 12/17/2003  16:07
                  Incoming ACD                    PBX Calls
               (B)---------------------- ----(C)-------------------------------
                        Duration                        Duration         Duration
Ext Name       Answer    H:MM:SS Recovered Answer    H:MM:SS    Out    H:MM:SS
114 MATT           44    5:48:42         1     14    1:15:44     13    0:41:10
115 RICK            0    0:00:00         0      6    0:14:32      2    0:03:55
102 CRAIG          33    5:15:00         3      9    1:03:35     15    0:27:30
103 TOMMY          19    2:47:39         1      9    0:20:10     15    0:27:15
104 JOHN D          1    0:10:21         0     11    0:25:30     11    0:57:35
106 SCOTT          36    3:59:38         1     24    1:57:02     20    0:36:12
112 CHRIS          51    5:00:19         1     19    2:04:02     17    0:20:54
116 PHIL           31    3:14:50         0     23    1:35:41     34    0:36:33
105 BOBBY          40    4:42:32         5     15    0:43:31     18    1:20:01
119 EDWARD         41    4:25:11         2     24    0:59:53      8    0:26:17
117 MARK D          0    0:00:00         0      2    0:00:28      4    0:06:40
113 DAVID           0    0:00:00         0      7    0:52:38     13    0:42:46
120 JENNY A         4    0:09:07         1      4    0:16:10      0    0:00:00
               ___   _______       ___   ___   _______    ___   _______
Totals (D)     300   35:33:19        15   167   11:48:56    170   6:46:48
Average CO queue time: 0:21 -- Max CO queue time: 0:50

Department Detail              Dept: 293, RMT TSC
      Start: 12/15/2003  17:07          End: 12/17/2003  16:07
                  Incoming ACD                    PBX Calls
               ------------------------- -----------------------------------
                        Duration                        Duration         Duration
Ext Name       Answer    H:MM:SS Recovered Answer    H:MM:SS    Out    H:MM:SS
117 MARK D          0    0:00:00         0      2    0:00:28      4    0:06:40
113 DAVID           4    2:29:08         4      7    0:52:38     13    0:42:46
126 MARK S          0    0:00:00         0      0    0:00:00      0    0:00:00
124 RICHIE          0    0:00:00         0      0    0:00:00      0    0:00:00
125 AL Z            0    0:00:00         0      0    0:00:00      0    0:00:00
116 PHIL            0    0:00:00         0     23    1:35:41     34    0:36:33
119 EDWARD          0    0:00:00         0     24    0:59:53      8    0:26:17
               ___   _______       ___   ___   _______    ___   _______
Totals              4    2:29:08         4     56    3:28:40     59    1:52:16
Average CO queue time: 0:21 -- Max CO queue time: 0:50

Department Detail              Dept: 299, RMT CSC
      Start: 12/15/2003  17:07          End: 12/17/2003  16:07
                  Incoming ACD                    PBX Calls
               ------------------------- -----------------------------------
                        Duration                        Duration         Duration
Ext Name       Answer    H:MM:SS Recovered Answer    H:MM:SS    Out    H:MM:SS
101 VIRGIL          0    0:00:00         0      0    0:00:00      0    0:00:00
107 MIKE E          0    0:00:00         0      1    0:00:01      0    0:00:00
123 SCOTT           0    0:00:00         0      0    0:00:00      1    0:00:02
```

(See next page for explanation.)

Function 73 report description

The ACD department detail report is divided into four major sections: the report header, the incoming ACD call statistics, the PBX call statistics, and the report footer.

Report header

The **report header** Ⓐ includes the report name ("ACD Report by Department, Current" or "ACD Report by Department, Previous"), ACD department name and number, report start date and time, and ending data and time:

- **Start** — Beginning date and time of the reporting period. This will match the ending date and time of the previous report.
- **End** — Ending date and time of the reporting period.

Incoming ACD call statistics

The **incoming ACD call statistics** section Ⓑ shows ACD calls offered to each ACD agent position. These are calls that are transferred to, or ring into, the department number and then are distributed to the agent positions (extensions).

Column name	Description
Ext	ACD extension
Name	Extension name
Answer	Number of ACD incoming calls answered at that extension (includes Esi-Link calls to the ACD department)
Duration	Total time connected to ACD calls
Recovered[1]	Number of ACD calls unanswered at that extension and returned to the ACD queue.

PBX call statistics

The **PBX call statistics** section Ⓒ shows non-ACD calls for each extension — *i.e.*, all calls that weren't delivered directly through the ACD department number.

Column name	Description
Answer	Number
Duration	Total time connected to incoming PBX calls
Out	Number of PBX calls originated at that extension
Duration	Total time connected to outgoing PBX calls

Report footer

The **report footer** Ⓓ includes totals of the incoming ACD call statistics and PBX call statistics; it also includes the average and maximum **queue times** for each ACD department:

- **Average CO queue time** — The average length of time callers were holding ('queued") for an available agent over the reporting period.
- **Max CO queue time** — The maximum length of time one or more callers had been queued for an available agent over the reporting period.

[1] Each time a call is recovered, that ACD extension will be automatically logged-out of the ACD department. For more information, see the *Feature Phone User's Guide for X-Class*. (ESI part # 0450-0603).

Notes:

1. A CO call transferred to an ACD department or ACD extension will be counted as a new call each time it's successfully transferred.
2. An ACD call transferred to the same, or another, ACD department will be counted as a new ACD call for that department.
3. An ACD call transferred to an ACD extension will be counted as a PBX incoming call for that extension.
4. A PBX call (outgoing or incoming) transferred to an ACD department will be counted as an ACD call.
5. A call retrieved from hold will be counted as an incoming PBX call.
6. PBX calls that forward to voice mail or other forwarding destinations are not included in the ACD department report.

SMDR

SMDR (station message detail reporting) call records are output in real time via an ESI phone system's **Maintenance/SMDR** serial port. Connect a standard serial printer or call accounting system to the serial port. SMDR data will be stored temporarily if a laptop is connected for programming (five minutes after you exit programming mode, the buffered SMDR will resume output to the serial port).

The output from the serial port is: 8 data bits, 1 stop bit, and no parity, 1200 baud.

SMDR may be output in one of two formats, selected in system programming: **tabular** or **CSV**. The tabular format is the default.

Tabular SMDR format

The tabular IVX SMDR output format, which is compatible with the standard Panasonic® DBS® format, is as shown below:

```
         1         2         3         4         5         6         7
12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678
T MM/DD HH:MM:SS HH:MM:SS NNN XXXXXXXXXXXXXXXXXXXXXXXXXXXX                    LL
```

The columns are:

- **Call type** — Outbound ("O"), inbound ("I") or transferred ("T") at column 1.
- **Date** ("MM/DD") — Begins at column 3.
- **Start time** ("HH:MM:SS") — Begins at column 9.
- **Duration** ("HH:MM:SS") — Begins at column 18.
- **Extension number** ("NNN") — Begins at column 27.
- **Digits dialed** (right-justified)**/Caller ID** (left-justified) — Begins at column 31 (28 characters).
- **CO line number** ("LL") — Begins at column 77.

Each record is terminated with a line feed and carriage return character.

CSV SMDR format

The **comma-separated value (CSV)** format is compatible with *Microsoft® Excel®* and other spreadsheet applications. A CSV record will be output for each completed call, and will be represented as follows (word-wrapped):

Format:

```
"T","MMDDYYYY","HHMMSS","HHMMSS","NNN","XXXXXXXXXX. . .XXX","CCCCCCCCCC. . .CCC","LL"
```

Example A:

```
"I","07042002","000852","000059","101","2144229700","ESTECH SYS INC. ","54"
```

Example B:

```
"O","10312003","221502","020512","190","12125551212","","11"
```

(Continued)

The fields are:

- **Call type** ("T") — Outbound ("O"), inbound ("I") or transferred ("T").
- **Start date** ("MMDDYYYY") — Six characters, zero-filled.
- **Start time** ("HHMMSS") — Six characters, zero-filled; 24 hour clock.
- **Duration** ("HHMMSS") — Six characters, zero-filled.
- **Extension number** ("NNN") — Three characters, space-filled, right-justified.
- **Digits dialed/Caller ID** ("XXXXXXXX . . . XXX") — Up to 28 characters, null-filled.
- **Caller ID name** ("CCCCCCCCC . . . CCC") — Up to 24 characters, null-filled.
- **Line number** ("LL") — Two characters, null-filled, right-justified.

Each field is delimited with double quote marks and separated with a single comma. Null fields are still included as place holders (see Example B, p. G.1). Each record is terminated with a line feed and carriage return character.

Reporting conventions and rules

- Inbound and outbound call records are generated only for calls between a station and a CO line.
- The duration of each call record represents the period of time that that station controlled its portion of a call. A record is generated each time a station does any of the following:
  - Disconnects.
  - Places a call on hold.
  - Transfers a call.

  A single CO call could be included in multiple records if it is transferred from station to station.
- Periods when calls are placed on hold or attempts at supervised transfers are unsuccessful are included in the station's record.
- Periods when calls are on hold, in the auto attendant, leaving/retrieving voice mail or in an ACD queue are not included in call records.
- A new record begins when a station answers a call or a hold recall.
- Records will be generated independently for all stations in a conference. If more than one CO line is involved in a conference, each call record generated by that conference will be associated with only the last line disconnected.
- Dialed digits don't include the line group or location number.
- Outbound calls begin a call record 10 seconds after the call has cleared toll restriction.

Index

ACD
  ACD department detail report, F.1–F.4
Alphanumeric characters, entering, A.4
Auto attendant block, C.1
Call waiting, C.1
Caller ID, A.1
Day/night/holiday modes, A.5
  Remote setting, A.5
Do not disturb (DND), C.1
Esi-Dex, B.3
  System speed-dial, C.1, F.1
Functions
  Function 1 — System parameters, B.1–B.3
  Function 3 — Extension programming, C.1–C.4
  Function 5 — Voice mail programming, D.1–D.5
  Function 6 — Recording, E.1–E.4
  Function 7 — Reports, F.1–F.4
Holiday mode
  Remote setting, A.5
  Re-recording greeting, E.2
Mailboxes
  Cascade paging, D.4–D.5
  Group, D.2
  Guest/info, D.1–D.2
  Q & A, D.5
MOH, E.2–E.4
Overlays, A.2
Password, Administrator, B.1
Programming
  Accessing user station programming, B.1
  Keys, A.4
  System, A.3
  System fixed numbering plan, A.5
Prompts, re-recording, E.1–E.2
Recording, C.1, E.1–E.4
  MOH programming, E.2–E.4
  Recording directory names, E.2
  Re-recording system prompts, E.1–E.2
Reports, F.1–F.4, G.1
  ACD department detail report, F.1–F.4
  SMDR, G.1
  System program report, F.1
  System speed-dial list, F.1
  Voice mail programming report, F.1
  Voice mail statistics report, F.1
Serial ports, G.1
Service observing, C.1
SMDR
  SMDR report, G.1
Speed-dialing. *See* Esi-Dex
System modes. *See* Day/night/holiday modes
System program report, F.1
System prompts, re-recording, E.1–E.2
Tenant service, E.3
Time/date, setting, B.1
Toll restriction, C.1
Unified messaging, A.2, C.3
VIP, *A.2*, C.3
Voice mail programming, D.1–D.5
  Cascade paging mailboxes, D.4–D.5
  Group mailboxes, D.2
  Guest/info mailboxes, D.1–D.2
  Message notification, D.2–D.4
  Q & A mailboxes, D.5
Voice mail statistics report, F.1

We Make It Easy To Communicate

www.esi-estech.com